

THE SENTINEL

Siberia: Its Railway.
L. S. H. H.

In the whole of Siberia there are not many more people than there are in London, and yet you might put the United States within its boundaries without touching the edge anywhere, and fill up the gaps and odd corners with all the States of Europe west of Russia. It is an enormous territory, in fact, in which no one district can be taken as representing the rest, so that the most contradictory opinions concerning it appear in books according to the locality visited by the writers. In a general way it can be divided into three zones running right across. To the north, the Tundra, stretching inland from the Arctic Sea, swampy and treeless, ranging from 150 to 400 miles in width. Then the Taiga, throwing its spurs northward along the river valleys, as in its turn it is broken into by the arable lands to the south. This is the Siberian forest. "Siberian poplars," says Mr. J. Y. Simpson, in "Side Lights on Siberia," "with ash grey stem and quivering leaves; spruces, with their regular isosoles triangled contour and dark shading; giant larches tower above their fellow trees whose peculiar branches are crowded with knob-like bunches of green needles; Scotch firs with cinnamon colored upper trunks tending down to sombre iron grey; the Oriental pitch pine, and, toward the outskirts, birches with pure white gentle stems, or moisture-loving alder—these form the body, while the padding is largely left to the small but graceful Siberian spruce, with smoother bark and darker leaves than the ordinary spruce fir. It is a place of gloom below and silent conflict in midair." Through it and the third zone of rich agricultural land on which it borders runs the new railway that is to open the country to colonization as the Canadian Pacific is doing for Western Canada. This wonderful railway, the longest ever built by a Government, has nothing to pay for its land, nothing to pay for parliamentary expenses, legal charges or compensation, and is not expected to yield a dividend for a generation. And it is estimated to cost about half as much as the London Great Western, and will be about twice as long. The comparison requires considerable qualification to be of much value, but it is worth while making, as showing the difference between a railway in a populous country and one running through a wilderness.

The great project took about forty years to think out, and was not of native origin. Soon after Muraviev carried Russia to the Pacific seaboard by annexing the mouths of the Amur, an English engineer offered to lay a tram road across Siberia. In 1857 Collins the American came forward with his scheme of the Amur Railway Company from Irkutsk to Chita, which is to form part of the present line. Next year three Englishmen, Messrs. Morrison, Horn and Sleight, proposed to build a railway from Moscow, through Nijni Novgorod to Tartar Bay. But in their case, as in the others, nothing was done beyond a polite acknowledgment of their suggestions, which were accepted as stimulants to native energy. As it had become obvious that, as was only natural and politic, the railway would be entirely a Russian enterprise, foreigners ceased to apply, and plan after plan was submitted by Russian projectors until sufficient information had been obtained to warrant the appointment of a special commission, on whose recommendation the European lines were, in 1878, extended across the Urals to Ekaterinburg, and four years later to Tiumen, which was at first intended to be the departure point of the route to the Pacific. Further surveys were then made, and the outcome was the railway now being built, which was estimated to cost 350,000,000 roubles, and will almost certainly cost more. Throughout its length it keeps well to the south, that for military reasons it may skirt the frontier, and for commercial purposes it may run through the richest country and cross the chief rivers near their sources as they are navigable. The main line from St. Petersburg runs through Moscow to Kizna, and thence on wards, crossing the Volga at Samara and the Bielaya at Ufa, to Miass down to Cheliabinsk, where the Great Siberian begins. When the enterprise was under final consideration the choice had to be made between three routes, but as all the three would inevitably meet near Nijni Udinsk, the shortest—that through Miass, and not through Tiumen—was determined upon.

The new line thus crossed the Tobol at Kurgan, the Ishim at Petropavlovsk and the Irtysh at Omsk, where the bridge is 700 yards long and the embankment 40 feet high. It then goes through Kainsk, north of Lake Chani, to Kolivan, where it crosses the Obi and turns northeastward to Atchinsk. From Cheliabinsk to Kolivan it is fairly level, and its first section to Kurgan almost straight, the only curves being to avoid the lakes, marshes, bogs and deep valleys that were in its way. At Kurgan it enters a fertile zone in which right away to the Tchulim at Atchinsk the only engineering difficulties were in bridging the rivers. It seems strange at first sight that it did not go through Tomsk, but that city is difficult of direct approach, owing to the swamps and forests in its neighborhood, and is served by a branch line. Another town that had to be left to the northward was Yeniseisk, the Yenisei being crossed at Krasniarsk by a bridge 1,000 yards long. Here the line descends with a rush into the valley, to rise to an equal height on the other side, and run up and down all the way to Irkutsk and Lake Baikal, between which and Chita it reaches its summit level of 3,665 feet. Beyond Atchinsk the country is mountainous, and the road is one long succession of cuttings, embankments and bridges over ravines. Another difficult stretch which the surveyors are seeking to avoid is the hundred odd miles by the shore of Lake Baikal, where the track will have to be protected by dykes and retaining walls, and run under granite crags and over brawling streams and through a tunnel nearly two miles long, where the mountain spurs drop down into the lake. From Chita the route, as originally projected, descended the northern bank of the Amur to Khabarovka, where it crossed the river over a long viaduct, and whence it struck to the south to ascend the east bank of the Ussuri and reach Vladivostok down hill from Lake Khanka. On a further survey the route from Khabarovka southwards, known as the Ussuri line, was somewhat modified, and, as completed last year, it keeps away from the Ussuri river for from two to twenty miles. It is thus almost clear of the Ussuri's floods, and is a dozen miles shorter than was at first intended. The most difficult portion of the whole route, which from Cheliabinsk to Vladivostok measures 4,715 miles, is that between Chita and Stretensk, along the wild valleys of the Ingoda and Onitka. Midway between these towns is Onon, whence under the Cassini treaty of 1896 the Trans-Manchurian line is taken off to Tsitsihar. Here one branch is to run north to join the original road, another—the alternative main line—almost due east to Nikolai, on the Ussuri line to Vladivostok, and a third more to the south, and likely to be most used, to Kirin, where it branches with one arm up to Vladivostok and the other to Port Arthur, a branch from Mukden joining the existing line from Tientsin at Shanhaikwan.

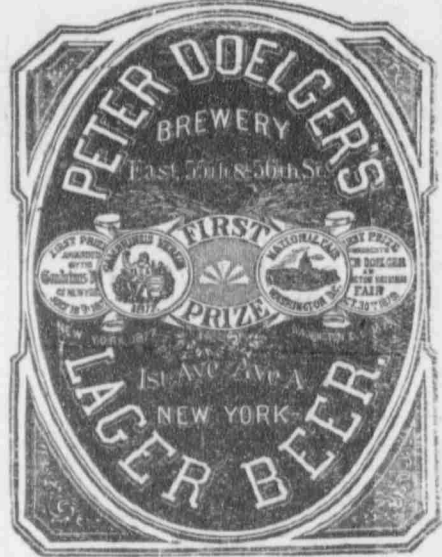
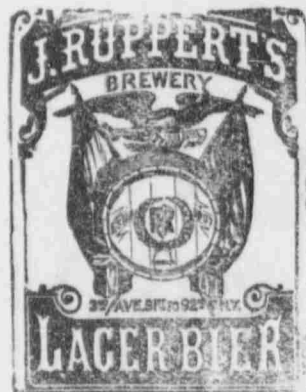
Perils Encountered by Divers.
David Paton, in "Good Words"

Divers who have been down in foreign seas tell of exciting encounters with sharks. But it appears that "the demon of the sea," with all its voracity, is a little timid in presence of the strange creature that wears a shining helmet, with the eye of a Gorgon and a long plume of hissing air bubbles. A diver who spent some years at the Australian pearl fisheries describes in this way his first encounter with a shark:—"I felt instinctively," he says, "a strange presence before I saw anything. The small fish usually found in great numbers among the corals had entirely disappeared, and the absence of these fitting little companions, when one has been accustomed to them, produces the effect of intense stillness. A creepy, indefinable sensation of dread took hold of me, and it became one of downright terror when I turned and saw, within ten feet of me, the bulk of an immense shark. The creature lay almost motionless, half hidden among a mass of coral web corallines. My first thought was to be pulled up; but as fish have human nature enough to want a thing as soon as they see it it being taken away from them, I rejected the idea. A sweep of its tail, and the great fish and I were face to face. Holding my breath, I stood perfectly still, my heart beating wildly and my eyes riveted on the wicked eyes and cavernous mouth of the shark. I felt that the monster was inspecting me with some curiosity, and after a few moments I became aware that by an almost imperceptible motion of its flexible tail it was gradually approaching me. Nearer and nearer came the shark, the shovel-shaped nose pointed directly to my face glass. Flesh and blood could stand it no longer, and with a yell I threw up my arms. Instantly there was a swirl of water, a cloud of mud, and my enemy vanished."

Another shark story, this time from the West Indies. "A large steamer," the diver relates, "had struck on a reef and then slipped off into deep water, taking down with her the mails and a valuable cargo. The crew were some papers that were particularly wanted, and I was in the chart room under the bridge working for them when suddenly, as I turned, I saw the snout of a wicked shark close to me. It was a nice fix to be pinned up in the corner of a little square room with a big brute between me and the door. I went creepy all over, I can tell you. But I kept still, and so did he, except that he worked a fin lazily, like a screw steamer holding on against the tide. I got the knife in my belt loose, and waited. The shark evidently did not know what to make of me, and gradually drifted over to the other side of the room. I began then to move toward the door, and had almost reached it when the shark made a sudden rush in the same direction—and disappeared. Which of us got the bigger fright I don't know."

But encounters with sharks don't always end so. Some years ago an English diver, who was at work on a sunken wreck off the island of Diego Garcia, had a visit from the same shark every day for a week. At first he had no trouble in scaring it away; it was enough if he gave a turn to the escape valve in his helmet and let out a little air. But at the end of the week it had become very troublesome. The diver signalled for a knife and a looped rope, and then boldly held out his bare hand as a bait to the shark. The monster came on with a rush and was turning on its back when it was stabbed by the diver, who then passed the loop round its body and sent it up to the surface. A cool head should certainly be included in the equipment of a man who seeks to earn his bread in the sea.

A note from a recent report by Mascart says that a north pole had been found at Katchetooka, a village in Russia. The magnetic needle assumes a vertical position at this point, and the horizontal needle remains in equilibrium in positions.



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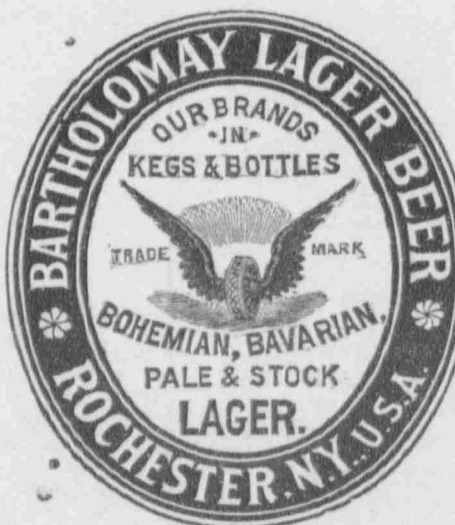
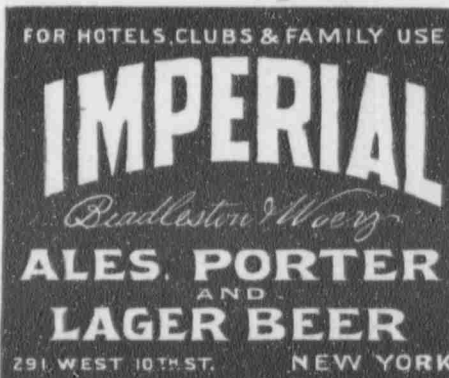
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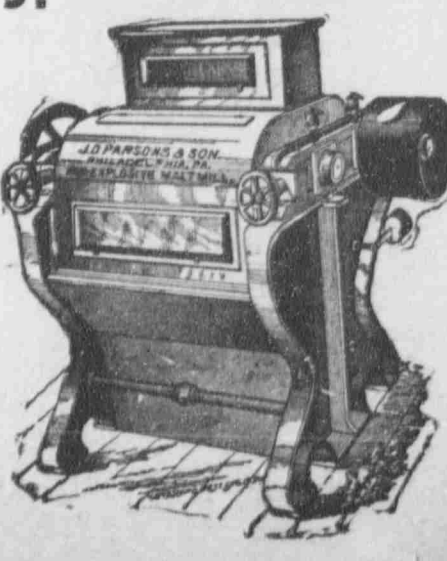
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